Michigan Department of Environmental Quality
Water Bureau

ANNUAL REPORT TO EPA ON CAPACITY DEVELOPMENT PROGRAM — FY 2004

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Michigan Annual Report to EPA on Capacity Development Program (CDP) — FY 2004

List of Acronyms

ACO	Administrative Consent Order
Act 399	Safe Drinking Water Act, 1976 PA 399, as amended
AWWA	American Water Works Association
CCR	Consumer Confidence Report
CDP	Capacity Development Program
CWS	Community water system
DWRF	Drinking Water Revolving Fund
FAP	Financial action plan
FY	Fiscal Year
LHD	Local Health Department
MCL	Maximum contaminant level
MDEQ	Michigan Department of Environmental Quality
MHC	Manufactured Housing Community
MMBA	Michigan Municipal Bond Authority
MOR	Monthly Operation Report
NCWS	Noncommunity water system
NOV	Notice of Violation
NTNCWS	Nontransient Noncommunity Water System
OTCU	Operator Training and Certification Unit
PWS	Public water system
UPEA	U.P. Engineers & Architects, Inc.
USEPA	U.S. Environmental Protection Agency
WB	Water Bureau

Michigan Annual Report to EPA on Capacity Development Program (CDP) — FY 2004

1. Current Strategy and Plans for the Future

Michigan's CDP has been implemented by the Water Bureau (WB) through amendments to the Safe Drinking Water Act, 1976 PA 399, as amended (Act 399), and by application of capacity development polices and guidance documents. These authorities have been blended into our long-standing program of technical assistance. The following two documents that have been submitted to the U.S. Environmental Protection Agency (USEPA) describe our CDP:

- *New Community Water System Capacity Guideline Document*, dated May 1, 2000
- *Capacity Development Strategy for Existing Public Water Systems*, dated August 1, 2000

The new systems program relies on two control points: construction permits and final inspection. New systems also include those that do not meet the definition of a community water system (CWS) at start-up but are designed to one day meet the definition, and those systems that are not currently a CWS that propose to extend the water system, thereby growing to become a CWS. One exception is a system that simply increases the number of users without altering or constructing the water system infrastructure.

The following CWSs and nontransient noncommunity water systems (NTNCWSs) were approved to commence operation or commenced operation in Fiscal Year (FY) 2004:

CWS	System Name
MI0005543	Village of Posen
MI0006568	The Chief At The Ski
MI0001915	Duvernay Park Apartments
MI0040681	Alto Meadows

NTNCWS	System Name
MI2004469	Grace Baptist College
MI2014363	Cardinal Health
MI2280263	Oak Hill Corners
MI2273063	Randy Holser Dealership
MI2190444	Century Plaza
MI2017647	Wallace & Wallace Prop
MI2040247	Maple Tree Montessori
MI2056547	St. Mary's Church
MI2060147	SJS Development
MI2023665	Gold Star Coatings

The following table outlines the status of the new CWSs and NTNCWSs during the first four fiscal years of the CDP.

Table of New Systems	Type System	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004
Total Number of New Systems • Proposed • Approved, or • Commenced Operation	CWS	52	23	16	21	17
	NTNCWS	10	26	35	8	10
Number of Proposed Systems • Not Yet Approved, and • Not Yet Commenced Operation	CWS	45	19	7	12	13
	NTNCWS	*				
Approved But Not Yet Commenced Operation	CWS				2	1
	NTNCWS	All approved systems have commenced operation. For manufactured housing communities (MHCs), the WB tracks when they are APPROVED to commence operation. MHCs may have other licensing criteria to meet with another state agency.				
Commenced Operation During the FY	CWS	7	6	9	9	3
	NTNCWS	10	26	35	8	10
Not in Compliance and Reason for Noncompliance	CWS	See notes	See notes	See notes	See notes	See notes
	NTNCWS					

* The WB has delegated the authority to local health departments (LHDs) to review, approve, and issue construction permits. LHDs do not track the number of applications for permits.

Notes to Table:

- NTNCWS that commenced since October 1, 1999 – All in compliance.
- CWSs that commenced in FY 2004 – All in compliance.
- CWSs that commenced in FY 2003 – Only one of the new CWSs in FY 2003 exceeded a drinking water standard. **Whitmore Lake Apartments** exceeded the total coliform maximum contaminant level (MCL); they issued a boil water order and posted a public notice, and quickly returned to compliance. **Beaver Creek Resort** issued the 2001 Consumer Confidence Report a month late. Beaver Creek Resort was an existing water system that converted to a CWS in 2001 and completed their capacity development requirements in 2003.
- CWSs that commenced in FY 2002 – **Grand Oak** exceeded the nitrate MCL in the period March 2001 to February 2002 but returned to compliance within four months. **Misty Cove Apartments** failed to collect a total coliform sample for the months of September 2002 and January 2003, and returned to compliance within days. **Rapid River Meadows** missed a coliform sample and returned to compliance the following month. **Royal View** failed to collect samples for the first six-month lead and copper monitoring period ending June 2002, but returned to compliance with sampling conducted in September. **Indian Lake Woods** collected quarterly samples late for volatile organic contaminants.
- CWSs that commenced in FY 2001 – **Traverse Manor** issued the CCR a month late. **Alabaster Township** failed to monitor for lead and copper during a six-month monitoring period, but returned to compliance immediately. **Dorr-Leighton**, an existing system that added infrastructure in 2001, failed to collect a sufficient number of repeat total coliform samples in June 2004 but returned to compliance the following month. **Sand Beach Township** missed the initial lead and copper sampling, but returned to compliance the following six-month period. **Apple Grove Estates** missed a coliform sample in their first year in operation but returned to compliance the following month. They also missed required disinfection residual monitoring in the first quarter of the implementation of this new rule but returned to compliance the following quarter.

CWS

Generally, a construction permit is issued based on the technical capacity of the proposed system. However, the financial and managerial capacity requirements may still be pending

while the system is under construction. Only after a final inspection and when the system has demonstrated capacity in all three areas is approval granted to commence operation. A New System Tracking Database tracks the progress of developing systems through the process.

The existing system strategy relies primarily on the capacity assistance component of the state's drinking water program, which the WB has traditionally referred to as technical assistance. Through routine system evaluations or capacity assessments, the WB staff determines which systems need capacity assistance. Based on the wishes of our stakeholders, the WB will not request a capacity assessment of an existing water system unless violations, deficiencies, or other factors indicate the system lacks technical or managerial capacity. Capacity assistance is provided through the WB staff or through other technical assistance providers to help communities build technical, managerial, or financial capacity. If capacity assistance is not requested or ineffective, Michigan practices a program of escalated enforcement.

Plans for the future include continuing the strong tradition of technical assistance provided by the WB staff during visits, evaluations, meetings, and training. Additionally, the WB staff is continuing to encourage communities to use the services of other technical assistance providers, many times at no cost to the systems. Through technical assistance set aside contracts, the WB is increasing the opportunities for CWSs to take advantage of other technical assistance providers.

Noncommunity Water System (NCWS)

The WB has delegated the authority to LHDs to review, approve, and issue construction permits. When water systems begin the permit application process, the LHD helps them outline their financial and managerial capacity. Prior to receiving approval to commence operation, NTNCWSs must submit a financial plan and a managerial plan that includes a contingency plan and designation of a certified operator, etc. The WB routinely measures the compliance status of NCWSs, including NTNCWSs. This information is used to prioritize technical assistance as well as educational and enforcement efforts as described in the next section.

2. Methods or Criteria Used to Prioritize Systems and to Measure Improvements

The WB established methods and criteria to identify and prioritize existing systems for capacity assistance in the strategy cited above. These methods and criteria are still in place and are also used to measure improvements in capacity, though some mechanisms have been refined and updated.

Compliance Information

Compliance data will be one baseline for measuring progress in the CDP. However, comparing compliance data from one year to the next becomes more difficult because of the rapidly increasing numbers of new rules and requirements each year.

With the onslaught of many new regulations that are likely to have a disproportionate impact on small systems, the number of systems in compliance may not tell the true story of improved capacity. Small systems make up the majority of systems in the state, and they make up the majority of systems in noncompliance. However, the majority of the population served by CWSs is supplied by large systems that generally comply with requirements. To put compliance data

into perspective, it may be useful to compare the percent of population served by CWSs that are in compliance with health-based standards and monitoring and reporting requirements. During 2002, the percent of the population served by CWSs meeting all health-based drinking water standards ranged from a low of 98.3 percent to a high of 99.8 percent. During the first quarter of the calendar year, the city of Ann Arbor exceeded the turbidity standard for a short time. The remaining quarters were 99.3 percent or higher.

To show compliance trends, the following table is data from Michigan's Annual Compliance Reports for calendar years 2000 through 2003 submitted to the USEPA each July.

Percent of Systems in Violation								
	MCL				M/R			
	2001	2002	2003	Trend	2001	2002	2003	Trend
Chemical								
CWS	0.1	0.0	0.2	increase	0.6	1.0	0.6	decrease
NCWS	0.1	0.1	0.0	*	5.3	4.5	0.3	*
Combined	0.1	0.2	0.0		4.7	4.1	0.3	
Total Coliform								
CWS	5.3	5.0	3.0	decrease	4.6	4	3.5	decrease
NCWS	3.2	3.1	1.8	*	10.5	9.7	5.3	*
Combined	3.4	3.3	1.9		9.8	9.1	5.1	
Lead & Copper								
CWS	0.1	0.0	0.0		0.8	1.0	0.8	
NCWS	0.0	0.0	0.0	*	0.8	0.6	0.2	*
Combined	0.0	0.0	0.0		0.8	0.6	0.3	
CCR					16.2	2.0	0.9	Decrease

* The NCWS fourth quarter FY 2003 not available at this printing.

Key to Table:

CCR Consumer Confidence Report—Michigan requires day care centers and K-12 schools to provide an abridged annual water quality report instead of a CCR. That compliance data is not included here.
CWS Community water system
MCL Maximum contaminant level—This is a health-based drinking water standard.
M/R Significant monitoring and reporting violations—They occur when no samples are taken or no results are reported during a compliance period or when follow-up monitoring was not performed after a positive total coliform sample.
NCWS Noncommunity water system
SWTR Surface Water Treatment Rule
TT Treatment Technique

The above table reflects a decrease in total coliform MCL violations and an increase in chemical MCL violations of less than one percent. Contaminant monitoring and reporting violations decreased less than one percent. The CCR rule requires all CWSs to deliver an annual water quality report to their consumers. The WB staff provided considerable assistance to systems the first couple of years, and the rate of compliance was very high. Subsequently, however, systems were expected to produce their CCR with less assistance from WB staff. One year saw a spike in violations (2001), but quickly declined to less than one percent in 2003. The table also appears to show a decrease in combined trends, however the NCWS results for the final quarter of 2003 are not yet available.

Evaluations and Surveillance Visits

Evaluations, visits, and construction permits continue to receive attention in the district offices. The following table shows the number and percentage of these activities in the last four FYs for CWSs. These do not include activities in the MHC program.

System Evaluations, Visits, and Construction Permits								
	FY 2001		**FY 2002**		**FY 2003**		**FY 2004**	
Evaluations Conducted	430		485		266		346	
	#	%	#	%	#	%	#	%
Satisfactory	323	75	347	72	192	72	256	74
Marginal	47	11	53	11	38	14	50	14
Deficient	27	6	35	7	21	8	17	5
Not Rated	33	8	49	10	15	6	23	7
Other			1	0				
Visits	1,385		1,302		1,069		1,193	
Permits (Received/Issued)	1,869 / 1,908		1,706 / 1,799		1,736 / 1,703		1,920 / 1,794	
Permits Issued Within 10 Business Days of Receipt	#	%	#	%	#	%	#	%
	1,378	72	1,335	74	1,261	74	997	52

This data reflects the following:

- The dip in the number of evaluations or sanitary surveys during FY 2003 was due, in part, to a merge with another division and an early-out retirement option for senior state employees. As a result, evaluations were not conducted at the expected rate of about 350 per year during FY 2003 but sprang back in FY 2004 as staff became more comfortable with the structure and management continued to emphasize timely evaluations.

- The percent of systems rated satisfactory, marginal, and deficient have remained about the same.

- To date, several evaluations are still pending in FY 2004. Greater efforts are being made to more accurately track evaluations and ensure evaluations are completed, which involves sending a letter of findings to the system within 30 days of the on-site evaluation.

- The number of on-site visits fell in FY 2003 but is beginning to climb in FY 2004. These visits are conducted to meet with operators and local officials, conduct evaluations, or check on progress of projects.

- The timeliness of permits issued (within 10 days of receipt) has dropped in FY 2004, possibly due to the increase in permits received of nearly 10 percent and the turnover of engineering staff.

Escalated Enforcement

Integrated into staff performance objectives are specific targets to return systems to compliance. Violations are expected to be addressed in a timely manner and fines issued for those systems failing to conduct monitoring or meet standards.

When fines prove ineffective or continued violations represent a serious public health threat, our staff uses other enforcement tools. If it is determined that a system has not made satisfactory progress in resolving serious deficiencies since the last evaluation, escalated enforcement is warranted. These enforcement actions are usually initiated by Notices of Violations (NOVs), but in the most serious cases, could begin with an order. For example, repeated fines issued against Harbor Towne Apartments in Southwest Michigan did not prevent further monitoring violations so the district staff initiated an NOV. Following the NOV, the WB offered the system an administrative consent order (ACO), which also included other deficiencies. The system entered into the ACO in October 2003 and has completed most of the items, such as submitting the pumpage report and completing and implementing a cross connection control program. The monitoring compliance has improved, however one item in the ACO remained unresolved resulting in a several thousand dollar fine, which they paid.

In addition to escalated enforcement, the MHC sector of the CWS program can issue Certificates of Noncompliance and Conditional Certificates of Compliance to MHCs, which are subject to licensure by another department of the state. These certificates provide input to the licensing department's decision to reissue or revoke a license to operate, based on health statutes and rules including drinking water. Certificates of Noncompliance are discussed later in this report.

Operation and Maintenance Problems

The WB continues to use an "important deadlines" module in our evaluation information tracking system. The WB district staff may use this module to track operation and maintenance milestones established as a result of formal evaluations, visits, or consent or department orders that the WB expects the systems to meet to return to compliance. Examples of problems staff may need to track are:

- Hydrant and main flushing
- Valve turning program
- Pump and motor maintenance program
- Main break frequency information
- Wellhead protection program/source water protection plans
- Monthly operation reports
- Recordkeeping
- Clearwell and finished water reservoir maintenance programs

WB District Staff Input

This vital element remains the primary factor to prioritize systems for capacity assistance.

NCWS

The WB contracts with LHDs to provide noncommunity program services on a statewide basis. The contracts set standards of performance and hold LHDs accountable for enforcement of Act 399. The rates of compliance with requirements for NCWSs are tracked on a quarterly basis. Tracking is focused on monitoring and reporting, drinking water standards, sanitary survey frequency, and significant noncompliers. The rollout of the new WaterTrack data system in April of 2004 allows quick online access to noncommunity water quality and facility data for LHDs and WB staff. This will improve program efficiency, response to water quality concerns, and program oversight capability. In addition to the quarterly updates, all LHDs are evaluated annually to determine if they are meeting contract requirements. This includes acceptable rates of compliance for the systems in their jurisdiction, review of LHD records for selected NCWSs, and field verification at selected NCWSs. A LHD with a violation rate that exceeds a target level can be found to be in noncompliance with contract requirements. Those agencies must submit an acceptable corrective action plan describing steps that will be taken to improve NCWS compliance under their jurisdiction. Repeated failure to improve system compliance can result in termination of the contract and funding.

3. Summary of Activities to Help Existing Systems Improve Their Capacity

Capacity Assistance

Capacity assistance has been integral to Michigan's drinking water program for decades, although it was not always referred to as such. Assistance or consultation has been the preferred method to prevent systems from falling into noncompliance. At times, however, the district staff serve as both capacity assistance providers as well as regulators.

WB Capacity Assistance

A primary objective of the WB is to provide excellent customer service. A means by which the WB achieves that objective is through technical assistance to CWSs through meetings, by telephone, and during site visits. Staff from one of our district offices have worked with the Carsonville council and water operators. As a result, Carsonville submitted project plans and will benefit from two Drinking Water Revolving Fund (DWRF) projects to replace transmission mains, provide looping, and install arsenic treatment. Staff also worked with the city of Bay City to submit a DWRF project plan for water treatment plant upgrades, which was accepted on the 2005 draft Project Priority List.

The primary means for WB staff to provide capacity assistance occurs after a routine evaluation (sanitary survey). District engineers detail their findings and recommendations in a letter to the system within 30 days. Evaluation letters help systems understand the severity of the deficiencies and importance of acting on the engineer's recommendations. For example, the Galesburg city council met with the WB staff to discuss upgrades to the water system based on the WB's determination that their storage facility was insufficient, that dead ends created pressure problems, and that well pumps do not operate as they should. The council voted to take action on an immediate problem to repair one well. The council was also able to discuss how the DWRF could help the city fund the needed upgrades.

Many times, a one-time capacity assistance meeting is sufficient to keep systems in compliance. In other situations, the district engineers spend more time with the system to help solve more complicated concerns. Often, water system operators want to comply, but they do not have the financial resources or support from community leaders to make the changes that are necessary. However, when options are particularly expensive, or when acceptable alternatives are not readily available, the WB may be reluctant to begin enforcement. When these difficult cases arise, the WB increases surveillance activities and attempts to address potential enforcement action at the same time.

As a result, district staff may attend municipal board meetings or council meetings to discuss a compliance schedule with specific items and completion dates and discuss the possibility of formalizing the schedule in a compliance schedule that is incorporated into a consent order. Community leaders need to hear the benefits of agreeing to a course of action that allows them time to address their problems without further enforcement or fines. During this time, district staff will be more closely involved as a capacity assistance provider to help the system meet the deadlines of the order.

Many of the district staff are working more closely with community leaders and encouraging them to attend regional meetings and training sessions for waterworks professionals. Some community leaders are reluctant to attend, but once they do, they have a greater understanding of the demands of operating a water system. They also see the importance of certified operator continuing education.

Financial Assessments on Existing Systems

To help existing CWSs improve financial capacity, a pilot project was conducted in FY 2002 to recommend procedures, identify potential obstacles, and suggest strategies for the possible implementation of a program to assist water systems with financial concerns and problems. The pilot project selected systems that serve a population of less than 10,000, received a deficient or marginal rating in a recent evaluation, and are not making satisfactory progress toward correcting the deficiencies due in some part to financial difficulties. Since commencing the program in FY 2003, we widened the selection criteria from systems that received a less than satisfactory rating to systems that could benefit from a financial assessment. As a result, several systems that are currently in compliance, but are concerned about future challenges such as meeting the new arsenic standard, are making progress toward that end with improving their financial capacity.

The WB has partnered with another division to conduct the assessments at no cost to the water system. A financial analyst in the DWRF Program conducts the assessment of the community's existing financial health and develops a Financial Action Plan (FAP). The assessment is a review of financial documents and an on-site meeting with system representatives. A FAP is a tailor-made comprehensive plan to strengthen the system's financial situation based on the assessment. Short and long range goals are identified in the FAP, each with two to five tasks to reach the goals. Each task is broken down into incremental steps with an estimated timeframe to complete each task. Useful tools to help complete the steps are included with the FAP such as, a sample water use and rate ordinance, and a service agreement checklist. The assessment is not designed to provide funding, however, financing options are discussed at the on-site meeting and further information on obtaining funding is provided with the useful tools, when applicable, such as tools to help apply to the DWRF. The system is expected to carry out

the FAP and the WB is available to assist when requested. The FAP is intended to also be a guide for the district staff. If a system falls into noncompliance with Act 399 partly due to failure to carry out the FAP, then the district staff may choose to include the FAP tasks and timeframes into an ACO. An outline of a typical assessment report is included in the Appendix.

To date, about 30 water systems have been nominated to undergo an assessment and 15 water systems have received their FAPs and are beginning to implement their plan. Recently the city of Beaverton underwent a financial assessment and is reaching their goal, which is to develop the financial capability to fund present and future needs. Their first task is to develop a capital improvements plan. Beaverton has developed a capital improvement project list to address many of their system deficiencies, and they are now seeking grants and other funding. The second task is to develop a rate methodology. They have formed a Utilities Committee, consisting of government, business, and citizen members. This Committee is working on a new water rate structure that is fair to all segments of the community, and creates an adequate water fund balance.

As a result of their financial assessments, Carsonville (pilot project participant) and Byron have submitted project plans for a DWRF loan. Both of their projects include treatment to meet the new arsenic standard.

To advertise this service, we have made presentations at the Michigan Section, American Water Works Association (AWWA) Regional meetings and published articles in the *Water Works News,* a joint newsletter of the Michigan Department of Environmental Quality (MDEQ) and the Michigan Section, AWWA. Some municipalities learned of the service through their engineering consultants.

Index of Technical Assistance Providers

An index of technical assistance providers was developed in 2000 as a result of a stakeholders meeting at which many of the listed agencies described the services they provide to the waterworks industry. This index is periodically updated and published in the *Michigan Water Works News*. The index is a "yellow pages" of technical assistance providers for water systems, community leaders, and MDEQ staff. This index is not all inclusive, but we hope it will serve as a starting point and grow as more organizations make themselves available to systems that need assistance in a capacity issue. Groups included in the index are:

- AWWA
- MDEQ - WB
- MDEQ - Environmental Assistance Division (designated Environmental Sciences and Services Division effective September 15, 2002)
- Michigan Rural Water Association
- Rural Community Assistance
- Rural Utilities Service

Services may include hands-on operational training, mentoring, rate studies, loans and grants, cross connection program training and planning, and CCR preparation. Many of these services are available at no cost to the system.

Technical Assistance Provider Contracts

Typically, a much greater percentage of systems that struggle with compliance are small systems. As a result, the WB used the technical assistance set aside to fund a four-year contract with U.P. Engineers & Architects, Inc. (UPEA), to perform on-site visits to pubic water systems (PWSs) serving fewer than 10,000 people including municipal systems, privately-owned systems, schools, day care centers, and MHCs, and to perform training for operators. To date UPEA has visited nearly 2,000 water systems and has trained over 800 NTNCWS operators of schools and day care centers. The on-site visits to privately-owned PWSs and schools have been especially well received and are beneficial.

Using a pilot study last year, we determined that UPEA could conduct source water assessments and arsenic assessments during on-site visits. Over 700 assessments have been completed throughout the state during these on-site visits. These assessments provided direct technical assistance to calculate source water susceptibility scores` and prepared small water systems to better meet the January 23, 2006, federal deadline for compliance with the new arsenic standard. The technical assistance contract ended on September 30, 2004.

Other Assistance

Currently the MDEQ is developing two new contracts to deliver technical assistance to public water suppliers serving a population of less than 10,000. These proposed two-year contracts are still pending state approval.

The first contract will provide technical assistance to assess and reduce critical contaminants in small PWSs statewide. This will include on-site visits to systems with elevated arsenic levels and pilot projects at selected systems to develop arsenic reduction strategies and tools. On-site visits will also be conducted at small systems to collect and analyze samples for Phase II and Phase V contaminants such as asbestos and dioxin under the state's Monitoring Waiver Program. Finally, training modules developed for NCWSs will be updated and training sessions will be held in areas of need throughout the state.

The second contract will provide technical assistance by developing new training modules for CWS serving less than 10,000. This will include one set of training modules to address priority issues for operators, with a second set to focus on small system managers and financial officials. Once developed, these modules will be pilot tested and training sessions will be conducted throughout the state. They will then be available for LHDs and other agencies to use for ongoing training.

The MDEQ will also use technical assistance set-aside funds, to the extent funds are available, for:

- Project planning costs for disadvantaged communities serving fewer than 10,000 people who apply for DWRF assistance;
- Support of a new arsenic position to be filled in 2005;
- Funding of LHDs to provide arsenic technical assistance and compliance follow up; and
- Financial assessment services to certain small CWSs with deficiencies found in a sanitary survey.

Funding

Michigan's DWRF is co-administered by the WB and the Michigan Municipal Bond Authority (MMBA). The WB handles all programmatic issues, while the MMBA serves the DWRF Program with its financial expertise. Prior to the creation of the DWRF, project financing for CWSs was left largely to the local unit of government or to individuals investing in their own systems. The DWRF provides a source of infrastructure financing. To date, the DWRF has committed funds to provide for low interest loans for 111 projects totaling over $330.57 million. Of those, funds for 12 projects totaling $60.17 million were committed in FY 2004.

This year resulted in the second and third largest projects since 1998. Independence Township is a financially segmented project to enlarge the existing well system, make improvements and upgrades to meet future flow demands, and to comply with the new arsenic standard. The Muskegon project will improve the filtration plant to eliminate discharge of waste wash water to Lake Michigan, add a pumping station, improve sludge handling, and improve the distribution system by eliminating dead ends, replacing mains, and upgrading storage tanks.

The following table summarizes the loans since FY 1998 including the number of systems that have completed the loan process through the MMBA:

DWRF Projects	FY 1998	FY 1999	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004
Number of Projects Funded	24	21	7	10	15	22	12
Commitments of Funds ($M)	$53.24	$51.38	$27.64	$26.71	$38.15	$73.29	$60.17
Number of systems that have completed the loan process through the MMBA	23	17	3	4	1	0	0

Examples of projects are to construct or upgrade water treatment plants, booster pumps, and storage facilities and to replace and upgrade water mains. Some systems receive binding commitments but are not yet ready to proceed with the project.

Training and Information

Operator Certification Continuing Education

Due to amendments to Act 399, a certified operator must be available at all CWSs, all NTNCWSs, and transient NCWSs that use certain types of treatment. As a result, more opportunities are being made available to train operators. Michigan's Operator Training and Certification Unit (OTCU) is in another division in the WB and provides nearly 30 training courses each year. The OTCU certifies another 156 training providers that offer other opportunities for continuing education credits including on-line courses. Major program activities during FY 2004 include:

- Issued 616 new drinking water certificates and processed 979 renewals due to operators completing their continuing education requirements.

- Established the Expense Reimbursement Grant program and awarded contracts to three training providers – Michigan Rural Water Association, AWWA Online Institute, and a private consultant.

- Implemented the computer program for Michigan training providers to submit attendee rosters electronically to OTCU via a proprietary software application.

- Validated database of exam questions with WB subject matter experts.

- Offered the first exams for the higher level classifications of complete treatment and limited treatment operators using questions validated by the WB subject matter experts.

- A restricted certification option is available for existing operators of certain small systems to continue to operate at their current location if they receive additional training. Of the 1,650 NTNCWSs, 1,485 (90 percent) have met the certified operator requirements. Four continuing education modules have been developed and pilot tested for operators holding level 5 certification. Twenty LHDs are contracting with the WB to provide continuing education for level 5 operators and be reimbursed by the WB.

- For the last seven years, the staff of the WB section responsible for oversight of the PWSs serving MHCs has provided training targeted for operators of these systems, many of which have restricted licenses. The audience is not only operators, but managers and owners of these CWSs. Many of these operators work at more than one system or may also work at NTNCWSs, so the training is improving the operation and maintenance of many more systems than the number of operators present. The training is slightly different each year to keep the operators interested and engaged. Topics of training for 2004 include:

    - Firm capacity

    - Source water assessments

    - Cross connection

    - Arsenic Treatment Options

- Storage
- Coliform sampling
- Regulatory update

Act 399

Act 399 gives the MDEQ the authority to inspect and order a system to make changes to a system, to limit the expansion of a system, or to limit the water use. The enforcement tools available range from fines applied by policies through WB orders to referring the case to the Michigan Department of Attorney General. As previously mentioned, we practice a program of progressive or escalated enforcement. The resource analysts in the CWS program track violations and initiate the administrative fines. The creation of the resource analyst position has allowed the WB to give greater emphasis to administrative fines, which is one step in the progressive enforcement and return to compliance process.

The WB has been discussing some rule changes to strengthen the CDP such as incorporating the requirement for a final inspection before commencing operation, which is now only required by policy and requiring general plans (water system maps) for all community systems regardless of size. Some of our own rules limit our ability to ensure adequate capacity in all systems. The rules requiring systems to prepare contingency plans and to provide standby power both exempt small systems serving fewer than 200 people or fewer than 50 service connections. However, because of our capacity development requirements, new systems, most of which are small, are not granted approval to commence operation without a contingency plan. Other requirements for new systems are a sampling site plan and an operations plan. As a result, only two CWSs that began operating since October 1999 have had an MCL violation, as mentioned earlier. More systems might have avoided violations if our rules did not exempt small systems from these public health measures.

Compliance and Enforcement

Evaluations and compliance information becomes the basis for enforcement. When systems fail to return to compliance, escalated enforcement including ACOs and department orders can be initiated.

Before escalated enforcement is used, many systems are encouraged to return to compliance when they are assessed fines for violations. Michigan's administrative fines policy was updated in 2001 to include timely submittals of monthly operation reports (MORs) and CCRs. The increase from 58 fines initiated in FY 2001 to 67 in FY 2002 was due primarily to fines for failure to submit a MOR or a CCR.

	FY 2001	FY 2002	FY 2003	FY 2004
Number of Fines Initiated	58	67	51	35
Number of Initiated Fines for Failure to Submit a CCR	0	10	3	10
Number of Initiated Fines for Failure to Submit an MOR	0	12	2	2

When a fine is not applicable or does not prevent further violations, the WB moves to NOVs and ACOs. The WB initiated two administrative consent orders for violations of Act 399 and the

administrative rules: Birch Run Township constructed without a permit, Harbor Towne Apartments violated several monitoring and reporting provisions of the administrative rules.

The restructuring of the WB in late 2002 merged the drinking water program with another program, which has an established enforcement unit. The Enforcement Unit developed a 3-tiered package to help district staff prepare three of the most common types of administrative orders. The package contains instructions and guidance to create a document ready for legal review. It is anticipated that the difficult process of completing escalated enforcement will be streamlined even further so that enforcement will be swift and effective.

As discussed in Section 2 of this report, the MHC sector of the CWS program issues Certificates of Noncompliance and Conditional Certificates of Compliance to MHC for drinking water deficiencies. Typically, deficiencies noted in the certificates address technical and managerial capacity such as isolation and construction of wells, and distribution system and storage tank requirements to assure a continuously adequate quantity and quality of water. Certificates were issued for drinking water deficiencies to two CWSs in FY 2000, six in FY 2001, eight in FY 2002, four in FY 2003, and one in FY 2004. The FY 2004 Certificate of Noncompliance was issued for lack of firm capacity, and failure to meet state standards for plumbing, storage tanks, appurtenances, and controls. Additionally, the MHC program issues Conditional Certificates of Compliance to systems that need to make improvements and upgrades to prevent noncompliance and maintain capacity. Examples of items that are expected to be completed include implementing valve turning and hydrant flushing programs, completing an operations and maintenance manual, and properly plugging wells no longer in use.

Security

The WB received approximately $1.2 million from the USEPA to implement provisions of the federal Public Health Security and Bioterrorism Preparedness and Response Act of 2002. A total of 16 two-day workshops were recently conducted at locations around the state for about 250 PWSs serving between 3,300 and 50,000 people. The training helps systems to complete their vulnerability assessments and emergency response plans, which include a review of water system operations, hazardous chemicals delivery and storage facilities, and prioritized vulnerable facilities lists. One-day seminars will be available to approximately 1,165 PWSs serving fewer than 3,300 people later in 2004. Continuing education credits will be given for this training. A small number of higher-risk systems also received direct on-site security training, including several NCWSs. The WB is developing a threat advisory notification system for water and wastewater systems. Currently the WB is gathering email addresses so it can notify systems via email of threat information.

NCWS

The majority of the activities of the noncommunity program staff are to assist LHDs and NCWSs maintain compliance with the federal Safe Drinking Water Act. These activities include:

- Written annual evaluation of LHD noncommunity program
- Quarterly compliance summary data to LHDs
- Individual technical assistance

- Group training and assistance with implementation including:
    - Source Water Assessment
    - Operator Certification
    - Lead/Copper Minor Revisions
    - Capacity Development
    - Consumer Confidence Reporting
- Support of a data system distributed to LHDs for reporting
- Support of a Website for LHD noncommunity program coordinators
- Development of a Noncommunity Program Manual
- Routine policy updates or clarification memos to LHDs
- Support of a website for NCWS owners
- Enforcement assistance via letters, phone calls, site visits, and hearings
- Collection of civil fines issued by LHDs to NCWSs for monitoring or MCL violations
- Technical Assistance Contract to help schools and child care facilities comply with Act 399
- Providing brochures, fact sheets, and other informational material

Michigan will continue to use the tools described above to assist LHDs and NCWSs attain acceptable compliance levels. However, it is anticipated available resources will not keep pace with increasing regulation of NCWSs including; Operator Certification, Lead/Copper Minor Revisions, Capacity Development, Ground Water Rule, and Arsenic. New regulations not only present new opportunities for violations, they can also erode compliance with existing rules by diverting resources.

4. Summary

Michigan expects to see more systems with increased capacity in FY 2005, with continued emphasis put on the financial assessment program and the use of more sophisticated tracking tools, especially in the NCWS program. In 2005, all groundwater CWS and NTNCWS will monitor for arsenic, and we expect several to exceed the new standard. Due to the WB efforts to inform systems of the new standard and work with them to remedy the situation through technical and financial capacity assistance, many fewer will exceed the standard than would otherwise.

Capacity assistance provided by the district staff will continue to be the primary component of Michigan's CDP, with a greater emphasis placed on referring deficient and marginally rated systems to other technical assistance providers as well.

Appendix: Outline of a Typical Financial Assessment and Financial Action Plan

Financial Assessment

Introduction: Population, location, transportation routes, community characteristics; description of the water system and major projects or concerns such as expansion, securing loans, meeting new drinking water standards; and major financial shortfall such as the need for a rate methodology

Requested Information: Budget, last two years of audited records, water use and water rate ordinances, latest rate ordinance or resolution, recent rate or feasibility study, and contract or service agreements with outside customers

Submitted Information: Supply usually does not provide all the information requested

Analysis: Summary or highlights of each of the documents provided by the supply

On-site Meeting: Date and attendees; list of items discussed, such as the financial concerns, the billing method, major recent projects

Financial Action Plan (FAP)

Goal One: Develop the financial capability to fund present and future needs

Task 1: Develop a capital improvement projects plan

Step 1: List anticipated water projects
Step 2: Estimate the cost of each project to be funded
Step 3: Project the anticipated date the project is to begin
Step 4: Calculate the dollar amount necessary to be set aside annually
Step 5: Establish a line item in the budget for capital improvement expenditures

Task 2: Develop and implement a rate setting methodology

Step 1: Identify water system expenses
Step 2: Identify replacement expenses and fund the replacement account

Goal Two: Establish the legal and managerial capability to protect the water system

Task 1: Develop a penalties section in the water ordinance

Task 2: Adopt the amendment to the ordinance

Tools Included With FAP

Sample resolution, sample water use and rate ordinance, service agreement checklist, DWRF informational brochure, project plan preparation guide, and securing a DWRF loan fact sheet